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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CUNNINGHAM, GREGORY F	
ART UNIT	**PAPER NUMBER**
2676	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/795,991	SHIN ET AL.	
	Examiner	Art Unit	
	Gregory F. Cunningham	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *36-67* is/are pending in the application.

4a) Of the above claim(s) *38,54 and 67* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36,37,39-53 and 55-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/30/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

XY

DETAILED ACTION

1. This action is responsive to communications of amendment received 5/9/2005.

2. The disposition of the claims is as follows: claims 36-67 are pending in the application. Claims 36 and 52 are independent claims. Claims 38, 54 and 67 have been cancelled.

Information Disclosure Statement

3. The information disclosure statement filed 5/9/2005 for "Hierarchical Texture Analysis Using Gabor Expansion" has not been considered at this time. It has been sent to Electronics Information Center (EIC) for retrieval and translation in a following action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 36 and 52 are rejected under 35 U.S.C. 102(b) as being disclosed by Ort et al., (US Patent 5,659,626), hereinafter Ort.

A. Claim 52, "An apparatus for describing texture features of an image [locating minutia in a gray [redacted] image of a fingerprint using a pair of [redacted] called "[redacted]" and "Minutia" [redacted]], comprising:

a generating unit to generate [filter] a regularity indicator indicating regularity of the image ['determining ... spaces of ridges at regularly spaced pixels' and 'determining ridge angle and frequency at regularly spaced pixels'], a direction indicator indicating direction of the image ['determining direction'; 'aligning filters by ridge direction'; col. 5, ln. 67 – col. 6, ln. 8 at 'The encoder of this invention analyzes a gray scale image of a fingerprint to provide an accurate identification of minutiae, their locations, and directions; to provide a quality map, a Ridge Angle Map, and a Ridge Frequency Map of the image; to provide an identification of cores and deltas and their locations and a ridge count between associated cores and deltas; and to store this fingerprint information in a Products File.'], and a scale indicator indicating scale of a texture element of the image [abstract: 'ordering gradient according to [redacted]; wherein 'Munutia' and its characteristic attributes correspond to texture]; and

an expressing unit to express a texture descriptor of the image using the regularity indicator [abstract: [redacted] and spacing of ridges at regularly spaced pixels; frequency at regularly spaced pixels], the direction indicator and the scale indicator [abstract: creating a state map of a fingerprint includes determining image quality, identifying minutia locations, determining areas of good quality where minutia are present, areas of good quality where no minutia are present and areas where quality is below a predetermined value to reliably determine presence or absence of minutia.];

wherein the regularity indicator expresses the regularity of the image as one of values "irregular," "slightly irregular," "regular" and "highly regular" [abstract: [redacted] and spacing of ridges at regularly spaced pixels; frequency at regularly spaced pixels]" is disclosed [as detailed].

B. Per independent claim 36, this is directed to a computer readable medium for the apparatus of independent claim 52, and therefore is rejected to independent claim 52.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 37, 39-51, 53 and 55-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ort et al., (US Patent 5,659,626), hereinafter Ort, as applied to claims 36 and 52 above, and further in view of Murakawa (US Patent 6,381,365).

A. Per claim 37, "The computer readable medium of claim 36, wherein the regularity of the image is expressed as one of a plurality of predetermined values" is disclosed by Ort supra for claim 36.

However, Ort does not appear to disclose "wherein the regularity of the image is expressed as one of a plurality of predetermined values", but Murakawa does in col. 19, lns. 50-60 at "Using these parameters, similarity D can be calculated from the following equation:

D=(W0.times.P0+W1.times.P1+W2.times.P2)/(W0+W1+W2) (18)

where W0, W1, and W2 are the weights assigned to P0, P1, and P2, respectively, and W0>W1 >W2. The greater the value of D, the greater the similarity between the two images. The value of D is therefore compared with a predetermined threshold value to determine image similarity."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

B. Per claim 39, "The computer readable medium of claim 36, wherein the regularity indicator comprises a quantized integer" is described by Ort supra for claim 36.

However, Ort does not appear to disclose "wherein the regularity indicator comprises a quantized integer", but Murakawa does in col. 19, lns. 31-35 at "A example of calculating similarity between the key image and a comparison image in step S604 above is described below. Image similarity can be calculated by **quantifying** the proximity in two images between pixels with a gray level of 1."; and in col. 20, lines 24-26 at "When searching for an image similar to a key image, an image data processing apparatus according to the present it can easily compare and determine whether two images are similar by evaluating image similarity based on the basic texture pattern extracted from the image".

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

C. Per claim 40, "The computer readable medium of claim 36, wherein the direction of the image is expressed as one of a plurality of predetermined values" is described by Ort supra for claim 36.

However, Ort does not appear to disclose "wherein the direction of the image is expressed as one of a plurality of predetermined values", but Murakawa does in col. 7, lns. 14-31 at "Because gray level occurrence is directly related to the periodicity of the texture pattern, the periodicity of a texture should be reflected in S.sub..theta. (i,j.vertline.d). Whether such periodicity exists is determined from a graph of inertia values obtained at distance d, where d ranges from 3, 4, . . . d.sub.max where d.sub.max is the greatest distance d), for each direction .theta.. This method of evaluation is described below. (29) The first step is to obtain inertia I[S.sub..theta. (d)] at each distance d for each direction .theta., and then obtain the lowest inertia value I.sub.ner (.theta.) from the set of inertia values I[S.sub.74 (d)] in each direction .theta.. I.sub.ner (.theta.) is obtained by the following equation (5) I.sub.ner (.theta.)=Min(I[S.sub..theta. (3)], I[S.sub..theta. (4)], . . . , I[S.sub..theta. (d.sub.max)]) (6) (30) The smallest and second-smallest values are then selected from I.sub.ner (0), I.sub.ner (45), I.sub.ner (90) and I.sub.ner (135). If the lowest of the selected inertia values I.sub.ner (.theta.) is less than a predetermined threshold value, the texture is determined to have a periodic characteristic."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

D. Per claim 41, "The computer readable medium of claim 36, wherein the direction of the image is expressed as one of values, 'no directionality', '0 degrees', '30 degrees', '60 degrees', '90 degrees', '120 degrees', and '150 degrees' " is disclosed, supra by Ort for claim 36.

However, Ort does not appear to disclose "wherein the direction of the image is expressed as one of values, 'no directionality', '0 degrees', '30 degrees', '60 degrees', '90 degrees', '120 degrees', and '150 degrees' ", but Murakawa does in col. 7, lns. 32-43 at "This is illustrated further in FIG. 5, a graph of inertia I at multiple distances d for a particular pixel in each of four directions .theta.. In the example shown, the minimum inertia I.sub.ner value was obtained at a distance d=7 for direction .theta.=0.degree., at distance d=7 for direction .theta.=45.degree., at distance d=13 for direction .theta.=90.degree. and at distance d=6 for direction .theta.=135.degree.. I.sub.ner (135) thus has the lowest inertia I of any direction, and I.sub.ner (45) has the second lowest inertia. Both I.sub.ner (135) and I.sub.ner (45) are also below the threshold value to determine periodicity, and it is therefore determined that the image texture has a periodic characteristic at both direction .theta.=45.degree. and 135.degree.." and in col. 9, lns. 23-31 at "It should be noted that texture orientation can be determined with greater directional precision by using a smaller angle increment between scanning directions. For example, if the angle increment used for gray level co-occurrence matrix calculation is 10 degrees, the scanning direction .theta.=0.degree. when n=0, .theta.=10.degree. when n=1, .theta.=20.degree. when n=2, and so forth. This, however, increases the number of calculation processes that must be executed, and thus increases the processing time required. An increment of 45.degree. is therefore used in the present embodiment."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

E. Per claim 42, "The computer readable medium of claim 36, wherein the direction indicator comprises a quantized integer" is described, supra for claims 36 and 41, wherein directions exemplified are quantized integers.

F. Per claim 43, "The computer readable medium of claim 36, wherein the scale of the texture element is expressed as one of a plurality of predetermined values" is described by Ort supra for claim 36.

However, Ort does not appear to disclose, "wherein the scale of the texture element is expressed as one of a plurality of predetermined values", but Murakawa does in col. 8, lns. 40-51 at "The normalized image data is then converted to a gray-scale image and digitized (S303). To address the problem of the digitizing process described in the above review of related technologies, the threshold value is not set to a pixel value with a high frequency of appearance, but is rather set to a value offset a predetermined amount above or below a median pixel value of a pixel value distribution after gray-scale conversion. This is described specifically below. (42) FIG. 10 is a graph of the pixel value distribution in relation to the pixel values after gray scale conversion for a certain image. There are 256 gradations possible in the present example."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

G. Per claim 44, "The computer readable medium of claim 36, wherein the scale of the texture element is expressed as one of values, 'fine', 'medium', 'course', and 'very course' " is disclosed, by Ort supra for claim 36.

However, Ort does not appear to disclose, "wherein the scale of the texture element is expressed as one of values, 'fine', 'medium', 'course', and 'very course' ", but Murakawa does in col. 6, lns. 36-52 at "This method is based on evaluating a two-dimensional probability density function f(i,j.vertline.d,.theta.) where the probability density function f(i,j.vertline.d,.theta.) indicates the likelihood of a pixel separated distance d in direction .theta. from a pixel having a gray level i having a gray level j. The gray level co-occurrence matrix is a matrix of functions f(i,j.vertline.d,.theta.) for each (d, .theta.), i and j indicating row and column positions, respectively. When the texture is coarse and the distance d is small relative to the size of the component elements of the texture, a pixel pair separated (d,.theta.) generally have similar gray levels, and the values proximal to diagonal elements of the gray level co-occurrence matrix are thus relatively high. Conversely, if the texture is fine and distance d is roughly equivalent to the size of the component elements of the texture, there is a higher probability that any (d,.theta.) pixel pair will be a pair of dissimilar gray levels, and there will be a relatively uniform distribution across all elements of the co-occurrence matrix."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

H. Per claim 45, "The computer readable medium of claim 36, wherein the scale indicator comprises a quantized integer" is described, supra for claims 36 and 43. Wherein there are 256 quantized gradations.

J. Per claim 46, "The computer readable medium of claim 36, wherein the texture descriptor of the image is expressed as a vector of the regularity indicator, the direction indicator, and the scale indicator" is disclosed by Ort supra for claim 36.

However, Ort does not appear to disclose, "wherein the texture descriptor of the image is expressed as a vector of the regularity indicator, the direction indicator, and the scale indicator", but Murakawa does in col. 6, ln. 31 – col. 7, ln. 3 at "Methods using a gray level co-occurrence matrix (GLCM) for texture analysis are known from the literature, and are described in detail in, for example, "Basics of image recognition II: feature extraction, edge detection, and texture analysis" (in Japanese, by Shunji Mori et al.; Ohmsha).

(22) This method is based on evaluating a two-dimensional probability density function f(i,j.vertline.d,.theta.) where the probability density function f(i,j.vertline.d,.theta.) indicates the likelihood of a pixel separated distance d in direction .theta. from a pixel having a gray level i having a gray level j. The gray level co-occurrence matrix is a matrix of functions f(i,j.vertline.d,.theta.) for each (d, .theta.), i and j indicating row and column positions, respectively. When the texture is coarse and the distance d is small relative to the size of the component elements of the texture, a pixel pair separated (d,.theta.) generally have similar gray levels, and the values proximal to diagonal elements of the gray level co-occurrence matrix are thus relatively high. Conversely, if the texture is fine and distance d is roughly equivalent to the size of the component elements of the texture, there is a higher probability that any (d,.theta.) pixel pair will be a pair of dissimilar gray levels, and there will be a relatively uniform distribution across all elements of the co-occurrence matrix.

(23) When building the gray level co-occurrence matrix in the present embodiment, the image is scanned in four directions .theta. at angles of 0, 45, 90, and 135 degrees passing through a center of the image as shown in FIGS. 4A to 4D and described in further detail below. Matrice S.sub..theta. (d) is defined as shown by equations (1) to (4) below using the gray level co-occurrence matrix M(d,.theta.).

(1) S.sub.0 (d)=[M(d,0.degree.)+M.sup.t (d,0.degree.)]/2 (1)

(2) S.sub.45 (d)=[M(d,45.degree.)+M.sup.t (d,45.degree.)]/2 (2)

(3) S.sub.90 (d)=[M(d,90.degree.)+M.sup.t (d,90.degree.)]/2 (3)

(4) S.sub.135 (d)=[M(d,135.degree.)+M.sup.t (d,135.degree.)]/2 (4)

(24) where M.sup.t (d,.theta.) is a transposed matrix of M(d,.theta.).

(25) These matrices can be used to calculate various feature quantities, construct a feature space, and discriminate textures." Wherein matrix notation correspond to abbreviated representation of vectors.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

K. Per claim 47, "The computer readable medium of claim 36, wherein the direction indicator comprises a dominant direction of the image" is disclosed by Ort supra for claim 36.

However, Ort does not appear to disclose, "wherein the direction indicator comprises a dominant direction of the image", but Murakawa does in col. 3, lns. 8-14 at "To process the image data, this image data processing apparatus uses an extraction controller for extracting

feature information descriptive of an image texture using pixel data for pixels located in a scanning band oriented in a specific direction through the image." Wherein "a specific direction" corresponds to "dominant direction".

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

L. Per claim 48, "The computer readable medium of claim 47, wherein the scale indicator comprises a scale corresponding to the dominant direction of the image" is disclosed by Ort supra for claim 47.

However, Ort does not appear to disclose, "wherein the scale indicator comprises a scale corresponding to the dominant direction of the image", but Murakawa does in col. 14, lns. 43-51 at "The normalized image data is then converted to a gray-scale image and digitized (S503). Using the normalized, gray-scale, digital image data, the image is then analyzed to determine the periodicity of image textures (S504).

(106) Periodicity is here defined as the repetition of a same pattern at a certain spatial interval (period or distance d) in a particular direction .theta. with a frequency exceeding a certain threshold value. This periodicity characteristic can thus be represented by distance d and direction .theta.." Wherein "a particular direction" corresponds to "dominant direction".

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination

with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

M. Per claim 49, "The computer readable medium of claim 48, wherein the direction indicator comprises a first direction indicator and a second direction indicator comprising a first dominant direction of the image and a second dominant direction of the image, respectively" is disclosed by Ort supra for claim 36.

However, Ort does not appear to disclose, "wherein the direction indicator comprises a first direction indicator and a second direction indicator comprising a first dominant direction of the image and a second dominant direction of the image, respectively", but Murakawa does in col. 15, lns. 9-15 at "Exemplary criteria used for this determination in the present embodiment are whether the texture pattern occurs at a regular period in at least two directions. If periodicity is detected in more than two directions, the two directions with the greatest periodicity, that is, the greatest frequency of appearance, are selected as the directions in which periodicity is present."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

N. Per claim 50, "The computer readable medium of claim 49, wherein the scale indicator comprises a first scale indicator comprising a scale corresponding to the first dominant direction of the image and a second scale indicator comprising a scale corresponding to the second dominant direction of the image" is disclosed by Ort supra for claim 49.

However, Ort does not appear to disclose, "wherein the scale indicator comprises a first scale indicator comprising a scale corresponding to the first dominant direction of the image and a second scale indicator comprising a scale corresponding to the second dominant direction of the image", but Murakawa does in col. 15, lns. 22-27 at "Let us assume, for example, that periodicity (direction .theta., distance d) was detected at both (0.degree., 3) and (45.degree., 2) as a result of texture analysis. The basic pattern of the image texture is then extracted based on the detected directions and distances. The basic pattern in this case could be as shown in FIG. 16A." Wherein distances "3" and "2" are "first scale indicator" and "second scale indicator" respectively.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply finger print identification system disclosed by Ort in combination with image data processing apparatus disclosed by Murakawa, and motivated to combine the teachings because they both pertain to identifying features as revealed by Murakawa in abstract.

O. Per claim 51, "The computer readable medium of claim 50, wherein the texture descriptor of the image comprises a vector of the regularity indicator, the first direction indicator, the second direction indicator, the first scale indicator, and the second scale indicator" is disclosed by Murakawa supra for claims 49 and 50. Wherein "both (0.degree., 3) and (45.degree., 2)" are vectors with direction and magnitude.

P. Per dependent claims 53 and 55-66, these are directed to an apparatus for performing the computer readable medium to perform a method of dependent claims 37 and 39-50, and therefore are rejected to dependent claims 37 and 39-50.

Response to Arguments

8. Applicant's arguments with respect to claims 36, 37, 39-53 and 55-66 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Responses

10. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Inquiries

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

On July 15, 2005, the Central FAX Number was change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005. After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

G.F. Cunningham

Gregory F. Cunningham
Examiner
Art Unit 2676

gfc

8/17/2005

Matthew C. Bella

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